Claims

1. A system for driving a compressor, comprising

an induction motor (2) for driving the compressor (3a), said induction motor including a squirrel cage rotor, and

a controller (1) for controlling the induction motor, said controller comprising

a memory (47) for storing drive patterns for driving the induction motor,

a first frequency generation means (43) for generating a field frequency based on a field command and/or

a second frequency generation means (44) for generating a voltage frequency based on a voltage command,

wherein a drive pattern is extracted from the memory based on the generated frequency or frequencies.

2. The system according to claim 1, wherein the controller comprises a processing means (42) for generating the field command and/or the voltage command based on an input request.

3. The system according to claim 1, wherein the controller is adapted to distinguish between a steady state and a transient state of the induction motor.

4. The system according to claim 3, wherein the processing means (42) is adapted to generate the field command and/or the voltage command depending on the state of the induction motor.

5. The system according to claim 4, wherein the field command and/or voltage command is generated based on look-up tables.

6. The system according to claim 4, wherein the field command and/or voltage command is generated based on a model based control.

7. A system for driving a compressor, comprising

an induction motor (2) for driving for driving the compressor (3a), said induction motor including a squirrel cage rotor, and

a controller (1) for controlling the induction motor, wherein the controller is adapted to distinguish between a steady state and a transient state of the induction motor.

8. The system according to claim 7, wherein the controller is adapted to control the induction motor depending on the state of the induction motor.

9. The system according to claim 8, wherein the controller generates a field command and/or a voltage command dependent on the state of the induction motor.

10. The system according to claim 9, wherein the field command and/or voltage command is generated based on look-up tables.

11. The system according to claim 9, wherein the field command and/or voltage command is generated based on a model based control.

12. The system according to claim 7, wherein the controller comprises

a memory (47) for storing drive patterns for the induction motor,

a first frequency generation means (43) for generating a field frequency based on a field command and/or

a second frequency generation means (44) for generating a voltage frequency based on a voltage command,

wherein a drive pattern is extracted from the memory based on the generated frequency or frequencies.

13. The system according to claim 12, wherein the controller comprises a processing means (42) for generating the field command and/or the voltage command based on an input request.

14. The system according to claim 1 or 12, wherein the first and/or the second frequency generation means (43, 44) is a voltage controlled oscillator.

15. The system according to claim 1 or 12, further comprising a counter (45, 46) receiving the frequency output of the frequency generation means (43, 44),

wherein the counter is adapted to count a value based on the frequency of the frequency generation means, and

the frequency is used as an address for accessing the memory (47).

16. The system according to claim 1 or 12, wherein the first frequency generation means (43) for generating the field frequency and the second frequency generation means (44) for generating a voltage frequency is used, wherein

the memory (47) is accessed by using a first address and a second address, and the system further comprises a first counter (45) and a second counter (46), wherein

the first counter is adapted to count a value based on the frequency of the first frequency generation means, and the second counter is adapted to count a value based on the frequency of the second frequency generation means, wherein

the count value of the first frequency generation means is used as the first address, and the count value of the second frequency generation means is used a second address.

17. The system according to claim 16, wherein one of the first and second addresses is a column address, and the other address of the first and second addresses is a line address.

18. The system according to any of the claims 1 to 17, wherein the compressor (3a) is a part of a turbocharger (3).

19. The system according to any of the claims 1 to 17, wherein the compressor is an electrically driven compressor.

20. The system according to any of the claims 1 to 17, wherein the compressor is part of an electrically assisted turbocharger.